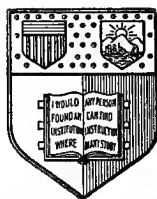


SF227
A88W7



New York
State College of Agriculture
At Cornell University
Ithaca, N. Y.

Library

DEPARTMENT OF AGRICULTURE VICTORIA.

REPORT

BY

MR. D. WILSON

DAIRY EXPERT,

OF THE RESULTS OF HIS

VISIT TO EUROPE

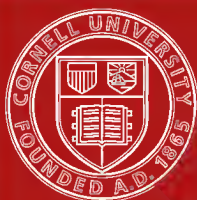
IN THE INTERESTS OF THE

DAIRYING AND OTHER INDUSTRIES OF
VICTORIA.

By Authority:

ROBT. S. BRAIN, GOVERNMENT PRINTER, MELBOURNE.

1894.



Cornell University
Library

The original of this book is in
the Cornell University Library.

There are no known copyright restrictions in
the United States on the use of the text.

MR. D. WILSON, Dairy Expert, having been instructed by the Minister of Agriculture to visit Europe for the purpose of collecting information appertaining to dairying, with a view of ascertaining in what manner the business connected with the export of dairy produce could be improved, also generally to obtain information connected with the trade in frozen meat, green and preserved fruits, wines, &c., the accompanying report of the results of his visit has been published for distribution.

D. MARTIN,
Secretary for Agriculture.

Melbourne.

REPORT.

Melbourne, 23rd September, 1893.

The Hon. the Minister of Agriculture, Melbourne.

SIR,

I have now the honour to submit a summary of the results of my visit to Europe in the interests of the dairying and other industries of the colony. The instructions I received before sailing were stated under five heads, as follow :—

THE BUTTER TRADE.

1. “Ascertain by experiment on the voyage and when landed whether the freezing of butter is injurious to it or not.”

FREEZING BUTTER.

The result of these inquiries has been to prove conclusively, as shown in my former report, that butter is not injured by freezing, and that considerable loss can be averted in future by having butter carried at lower temperatures than hitherto. At all experiments tried in the colony, on board ship, and in London, with the same butter frozen and chilled, the experts were unanimous in pronouncing the frozen butter to be worth from 3d. to 4d. per lb. more. Such being so, the question arises how much the colony has lost in last year's shipments alone for the want of this definite information. Take last year's exports (not to mention previous years) in round numbers to be 100,000 56-lb. boxes, 25,000 of which were compelled—as it now seems, fortunately—to go with meat and be frozen, which, by the way, were the butters that brought the highest prices in London; this leaves us with 75,000 cases, or 4,200,000 lbs., chilled, and, taking the loss on this at the low average of 2d. per lb., we find it amounts to the handsome sum of £35,000, which might have been in the pockets of our farmers had we obtained this information sooner.

SHIPS' LOGS.

While on this subject, I might mention that my experience of several ships arriving in London with dairy produce proved to me that we cannot depend on the refrigerator logs of these ships. From inquiries made I found there was a possibility of obtaining

a self-registering thermometer, and was anxious to have it tried on a voyage by our shipping companies, so that if it proved successful it would be at least a check on the steamers' records as now taken, but I regret to say that the companies interested refused to permit this. To my mind this was short-sightedness, as I consider it would be to our mutual advantage to have this thoroughly tested, and if it were successful it would have tended to allay a great deal of suspicion that our produce hitherto had not been properly treated.

SHIPPING.

2. "Inquire if our present system of shipping, packing, and selling, and the quality manufactured, are as good as they ought to be, and also if an increased quantity of freight room and a reduction in charge cannot be obtained for next season's shipments."

With regard to the shipping arrangements, they seem to be fairly well managed. Some pillage occurs either before or during transit, but it is not important. Greater care is still required in insuring uniform weights, in using better paper, and in solid ramming. With regard to selling, I have already reported the evil results of the custom of shipping one brand to several agents, which weakens the position of the agents when selling, and reduces the returns received by the makers. I have previously mentioned the harm done by cabling large shipments on leaving Melbourne. I have ascertained in London, by diligent inquiries and market attendance, that when large shipments are cabled buyers hold off, expecting to get lower rates on the arrival of these shipments. As to the quality, we cannot make butter too good for the London market.

AGENTS.

I have also come to the conclusion that the practice of making our brokers both commission agents and buyers at the same time does not conduce to our advantage. Not that I have the slightest grounds for impugning their honesty, nor that I wish to do so for one moment; but I do say where a broker is the owner of a certain quantity, and agent for another portion of the same shipment, it is but human nature—especially in a falling market—that he would save himself, and let the consignments take their chance. It is clear to me, therefore, that to do our selling fairly the shipments should be all purchases or all consignments on commission. The system adopted in Denmark is for a committee to fix a price at the port of shipment from week to week, and the buyers pay that or go without. Owing to the long journey to Victoria no doubt this course is impracticable with us, but something should be done in this direction. This, however, is a commercial matter, and I merely state the fact for the producers' information.

FREIGHT CHARGES.

The question of a reduction in freight, and an increased quantity of freight room, has engaged my serious attention, and I am happy to say I was successful in arranging for an increase in space in cooling chambers which I think will meet our increased requirements, and prevent the loss which has arisen from this source in previous years.

After numerous interviews with the two present contracting companies for the delivery of our butter, they gave me to distinctly understand that there could be no reduction in the present rates. Such being the case, it justified me in interviewing other companies, some of whom led me to believe that should reasonable term contracts be offered, not only for our butter, but for the whole of the colony's trade—which I understood to mean as much as is possible, our wheat, wool, meat, butter, cheese, wine, fruit, and our mails—there would be a strong probability of their tendering at much lower rates for a weekly service. I am of opinion, after thoroughly sifting the matter, that if we are to obtain a reduction on the present charges—and this must come sooner or later—these are the means to be adopted to obtain it.

I have dwelt a little longer than I intended on this important subject, but, looking to the future competition we are likely to meet with, it is absolutely necessary that our manufacturing and marketing expenses must be cut down to the lowest ebb, so as to successfully compete with our rivals in the market.

MIXING BUTTER WITH MARGARINE.

3. "Make a searching inquiry if any of our factory butter when bought is mixed with margarine, re-packed in the same boxes, and re-sold as best Victorian butter."

A most searching inquiry has not disclosed a single instance of this, and I do not think it is done. There is no doubt, however, that much of our best butter is sold for mixing purposes, and therefore never reaches the consumer as Australian butter. This trade of mixing butter with margarine in varying proportions, and the wonderful perfection which the manufacture of margarine has attained, are great obstacles to the sale of pure butter. If we want to successfully contend against this, and retain the position we have already secured in the British market, it seems clear to me that to meet the likelihood in future of low prices from this cause, and also the keen competition which will always exist, we must keenly and constantly watch the discoveries in science and improvements in machinery, so that we will be enabled to produce a cheaper and better article. In addition to this, we must improve the breeding and feeding of our cows, so that there should be no trouble in obtaining at least half-a-gallon more milk from each per day. The result of this would enable our farmers

to compete more successfully when low prices prevail. Further, we must look for protection against this fraud to legislation prohibiting the colouring of margarine in imitation of pure butter. I was fortunately able to have a long conference with Mr. Plunkett, M.P., who has charge of a Bill to deal with the sale of margarine, and to suggest several points in the interest of our producers, which, I am glad to say, have been embodied in the projected measure.

Unpalatable facts as these seem to be, I would not like to convey the impression that we should for a moment stay our hand in the increase of our butter production, because there is no country in the world can produce the milk cheaper all the year round than Victoria; and as England's and Europe's winter, or season of scarcity, is our colony's summer, or season of plenty, our large and consequently cheapened output can always compete successfully with Europe's supply at that time of the year, and it stands to reason that the home-grown winter output must always be small unless supplied by hand-fed stock or other artificial means, which will never be able to stand against our cheaply produced article; so that if it is a question of finding a market for pure butter we can defy competition. Such being the case, our farmers need not fear to go ahead on the lines we are now following, and thereby increase the present returns of half-a-million to that enormous extent which the demands of the British and other markets warrant.

CHEESE.

4. "Ascertain the most profitable make of cheese suitable for the British market. Take a small experimental shipment with you of our Victorian Cheddar, noting the proper temperature on the voyage necessary for landing the goods in perfect condition, and the proper packages and weights likely to suit the English market."

The great bulk of the cheese consumed in the British market is of the Cheddar make; weights from 60 lbs. to 70 lbs., two-thirds without colour, one-third with, and of a firm rich mellow flavour. It is exported a month old, and delivered in London to meet the best market—from January to April. Cheese of this class will average 50s. per cwt. The experimental shipment, as stated in my detailed report, compared very favorably with Canadian and New Zealand cheese, and with care exercised in the manufacture on the lines the department is now teaching, and keeping in touch with the yearly improvements—with the prospect of more liberal shipping charges—I can see nothing to prevent this industry assuming nearly as large proportions as our butter trade, which ought to mean in a very short time a yearly income to the colony of little short of a million sterling.

It is much to be regretted, however, time did not permit me to proceed through the great home of the cheese industry—Canada and the States—where undoubtedly much is to be learnt of economic manufacture on a large scale ; and I must express my belief that the information gained on the tour just completed—far surpassing my expectations—will show the advantage of these personal visits.

TRAVELLING EXPERTS.

Having met so many travelling experts of all nations in the various branches of the dairying industry, who habitually visit other countries to learn what is being done, I am convinced that if we desire to keep up to date in our knowledge and to move with the times, this now almost universal plan of obtaining information should on no account be neglected.

DAIRY EDUCATION.

5. "Visit countries where you are likely to ascertain if the system of dairying instruction and appliances are an improvement on what prevails in Victoria. Take note if you can find a reliable system of buying milk by butter results ; also make a special inquiry at the farms where milking machines have been in use if the result is satisfactory, and any other subjects that are likely to be of service for the still further development of the dairy industry of this colony, keeping in mind the desirability of returning in time for next season's export of butter and cheese."

Not having seen much in England, Ireland, and Scotland that would be of much service in our climate, I visited Denmark, Sweden, and France, but saw very little improvement in butter and cheese making machinery till I arrived in Stockholm. There I saw the De Laval butter fat tester at work in the hands of an expert, and no doubt it did its work well ; but I am afraid the cheaper cost of similar machines already in the colony will be given the preference. In all the factories I visited I found the milk paid for according to the proportion of butter shown to be contained in it.

STERILIZING MACHINERY.

An even more important appliance I saw here, however, was the sterilizing machinery, by means of which a splendid butter, with extra keeping qualities, can be made after the milk and cream have been heated to a temperature of 170 degrees Fahr. After exhaustive trials I was so deeply impressed with the immense value of this system to our industry that I at once sent to

Melbourne two instruments to enable us to try it. If successful, as I expect to be, in the manufacture of this class of butter, we will be enabled to produce a "tinned" article that would tap the markets of the East—hitherto practically untouched by us. From inquiries at the ports of call on the outward and homeward voyage, there is little doubt upon my mind that a large and profitable trade can be done in these Eastern countries at prices ruling from 1s. 4d. to 1s. 6d. per lb. In addition to the butter, I see no reason why we should not make an effort to obtain the ghee trade of India. I was informed by a reliable local man that should we make a fair attempt to secure that trade the consumption of Australian butter would be almost illimitable in that country. I cannot too strongly advise you to take definite action at once to sift to the bottom what trade can be done with these teeming millions of people for the sale of our butter, ghee, wines, brandy, and other products. While on the Indian trade the South African might be profitably inquired into.

MILK STERILIZING.

The system of sterilizing milk for household use I also examined, and can warmly commend. I sent out a sample of the bottle used for delivering it.

A full description of, and how to use, Hansen's new bacteria acid producer, for equalizing the quality and flavour of butter, I have also brought out, as well as a sample to start with. If successful, it should prove invaluable to our dairies.

PRESERVED CREAM.

Another matter I investigated here was a process of preserving cream sweet for months without the aid of chemicals. The sample then treated I sent to Melbourne three months ago, and will report upon it when I examine it later on.

LABOUR-SAVING MACHINERY.

Several of the labour-saving machines I saw deserve mention. The milk and cream can washing machine supplies a much-felt want in our factories, which I expect to see introduced soon.

The combined separator and butter extractor I have already reported as almost a failure.

Robinson's process for drying fruit and rabbits—already described—could not be completed in time to be tried in my presence; but I arranged for two reliable judges to be present at the trial and furnish a report. I have brought with me a sample of these rabbits (twelve months dried), which I send to the department for inspection.

With regard to milking machines—already reported on—I have inspected several since, but none of them took all the milk the cow had. Mr. de Laval, of Stockholm, seems, however, confident of producing very shortly a perfect machine, and has promised me for Victoria the first he makes.

In many other matters—small perhaps in themselves, but having an importance which cannot be over-estimated in their bearing on the future course of instruction, and which can scarcely be embodied in a report, but which I can impart with the aid of appliances and by personal explanations to our producers—my trip to Sweden will prove, I hope, of great advantage to the colony.

THE FRUIT TRADE.

GREEN FRUITS.

At the risk of repeating my former reports, I might mention I made exhaustive inquiries and repeated visits to fruit-growing centres and the largest fruit markets in the world, and found that there is an immense trade to be done in shipping green apples and pears of the proper sorts to England. There is no doubt in my mind that with proper grading and packing at the tree, care in transit to the ship, exported in a constant temperature of from 45° to 48° F., and landed in London from January to May in that good condition which the observance of these rules will effect, these fruits will realize, even in the ordinary markets, an average of from 8s. to 12s. per case, a few of the superior sorts bringing a few shillings more. With this line of fruits, I am sorry to say, Victorians have scarcely yet tapped the London market in bulk. The trade from Australasia in this direction has been hitherto confined to Tasmania and New Zealand. I saw thousands of cases arriving from those countries eagerly sought after at from 10s. to 15s. per case. They were packed with tissue paper two tier deep broadside in the cases. The soil and climate of Victoria are especially adapted for the cultivation and growth of those apples and pears most acceptable to British consumers, and, with the efforts now made by the Agricultural Department in fostering the cultivation of superior and most marketable sorts, I hope to see our fruit-growers in the very near future sharing the great wealth which this particular trade offers.

CANNED FRUITS.

While the market is, figuratively speaking, crying out for certain of our green fruits which I have described, and although we have not yet placed our canned fruits on the British market except in small lots, there is no doubt that if we keep up the standard of quality we will be able to successfully compete against the established brands which at present command the market. Certain brands of canned fruits have almost the monopoly of the London

and other European markets at present, and we can only get a foot-hold by bold and vigorous measures, but once we get that foot-hold success will be assured. We must get into a position to place the finished article on European markets in the best and most attractive condition, at a lower cost than at present, in order to insure an immediate demand from the great mass of consumers. The fruit must be canned as near the field of production as possible, at the lowest possible price, and in the most economical and approved methods. We must work vigorously to do this. Then we must boldly attack this foreign monopoly and cater for the consumption of the great mass of the people, who are the largest buyers of this class of fruit, by placing 2-lb. cans of apricots, pears, and peaches on the market at, say, about 6d. per can. This will introduce the product, and as long as excellence is maintained the quality of our canned fruits will command a market.

DRIED FRUITS.

This branch of the fruit trade is almost in the same position as the canned fruits. We must cheapen the cost of production, and place our fresh and superior article upon British markets at the same price—at least for the present—as the foreign article which now commands the market. For instance, I saw currants sold at 22s. per cwt., and cooking raisins at 15s., but the quality was nothing like as good as Victorian raisins, and these were the average prices ruling then. I believe our products could successfully compete with the foreign article, but we must get the foot-hold. All the commercial ingenuity we can summon must be exercised in getting our canned and dried fruits introduced to consumers, and, as I have said, once a foot-hold is obtained we have nothing to fear, providing proper care and economy are always observed in the selection, preparation, and marketing.

In preserving, 1d. per lb. covers the cost of cans, sugar, and labour, and a farthing, or perhaps a little over, covers the freight to London and charges there. By this it can be seen that the canned fruits which I have previously quoted can easily enter into competition with the canned fruit in the London market.

I also have it on the best authority that there is a great demand for apricot pulp in London at £20 per ton, which price ought to return remunerative profits to growers.

My figures are based throughout on a large output. As to our prospects in this direction I would like to say a few words.

California, a country similar to Victoria in almost every sense, in 1880 exported 4,900 tons of fresh and dried fruits; eight years later it exported 58,000 tons from laud, the majority of which yielded a profit of £60 per acre. With enterprise, Victoria has even a brighter outlook, as it has better soil. As an indication of the value of this system of agriculture, in 1888 the value of

the average yield of wine and fruit crops in California was £26 per acre, while that of the grain crop in the same country was only £4 10s. per acre.

There are vast fertile areas in our colony, to which I look for great fruit yields in the immediate future, and which only need population and enterprise to yield up their riches.

THE EXPORT OF FRUIT GENERALLY.

England imports nearly £9,000,000 worth of dried and green fruits annually, and in 1891 Victoria imported £320,000 worth. Our own trade, even without the heavy protective duty, lies within our easy grasp, and the English trade only requires economical production, careful selection and handling, cheap freights, and judicious marketing to fall into our hands, as the excellence of our fruits, once they get established, will command ready and extensive sale. But the crux of the whole question is to get a firm foot-hold, and to achieve this I most earnestly hope that until our brands become generally known our producers will content themselves with moderate prices at the outset.

While I say that 2-lb. cans of fruit at 6s. per dozen wholesale would capture the vast consumption of the masses who at present are not purchasers of high-class preserves, I certainly think that a comparatively large market can be obtained at 7s. and 8s., and even higher, if properly handled and marketed here and in London. With a due appreciation of the vast resources of the colony in the production of fruit, the time is not far distant when we must cater for the enormous and growing demand of the great mass of the British, and foreign, and colonial public who at present purchase canned fruits of a quality certainly very inferior compared with ours.

The pertinent question now is—Can we produce to meet the prices quoted? A satisfactory answer to this question will be the complete solution of the problem of the future prospects of the fruit-growing industry.

FROZEN MEAT.

This is a subject requiring such expert knowledge that I was especially careful to make the most minute inquiries into the condition, treatment, and sale of frozen meat after arrival in London. I would like to say a few words as to the outlook for Victoria in this industry, in order to justify the attention I gave the matter in London.

In 1882, New Zealand exported 9,000 carcasses of mutton, and ten years later was exporting upwards of 2,000,000 out of a total of 14,000,000 sheep. Victoria and the Riverina—for Victoria commands the Riverina districts—in 1892 contained upwards of

20,000,000 sheep, about 2,000,000 of which were boiled down for tallow, at a return of 4s. per head, while scarcely any were exported. I should mention those exported from New Zealand, minus the by-products, averaged 15s. per head. Two million pounds of English money flow into New Zealand every year out of this trade, while Victoria, until the last year, did not draw a penny. Victoria, with its command of Riverina, is especially suited to conduct an enormous frozen meat trade, and the wonder is that it is so behind the times in this respect. Were the trade properly established, every farmer could fatten a few sheep, while at present there is no inducement.

I found that the shipments of mutton from New Zealand were invariably landed in excellent condition; and at some of the sales which I attended I saw what I considered dressed carcasses rising two years old, of about 60 lbs. weight, sold at from 4d. to 4½d. per lb. I also saw a consignment of Australian lamb—not New Zealand—sold at 3s. 6d. per carcass. They were in very bad condition, and from inquiries made I found the fault was not at the English end. However, I was given to understand that this was an exceptional lot. The great considerations in this trade are proper selection, killing, dressing, and shipping. Young sheep, rising two years old, about 55 lbs. in weight, are the most favoured in London. As to the retailing of Australian or New Zealand mutton, one can scarcely find a butcher that admits having it in stock. It is as juicy, finely flavoured, and firm in the grain as any sold in the market, and this is admitted at the sales; but when you meet the retailers in their shops they have a different tale to tell. They simply will not sell it as Australian mutton if it is first-class, and the reason they give is that the public will not buy it as such. Thus they label it the mutton of certain English counties, and it is only too readily bought up. I have decided opinions about this difficulty, and they are:—All meat exported from this colony should be officially graded and branded, the same as butter, by the Government, and special arrangements should be made in London to place the meat upon its merits before the British consumers. This can, no doubt, be done through a properly constituted Agent-General's office, and by an amalgamation with the other meat-exporting colonies. Were the returns to Victoria from the 20,000,000 sheep which it commands the same as those of New Zealand with its 14,000,000 sheep—and they should be at least one-third more—where would our present national deficit be?

BACON.

The opinions of English experts are that it is very doubtful if we can profitably ship smoked or green sides of bacon, because the one would grow mouldy and the other too salt and dry at the end of a two months' voyage; and as the cask pork trade is

almost extinguished, on account of the frozen meat importations, it seems that there is little to be done in this line. I think, however, that it would be very advisable to make a trial shipment to settle the question.

In connexion with this important subject, a ray of light one day crossed the path of my investigations. In one of my visits to Smithfield market the best frozen carcasses of meat that I have ever seen were a line of New Zealand frozen pigs, weighing from 160 lbs. to 200 lbs. each, and which sold at $5\frac{1}{2}$ d. per lb. The expenses were about $1\frac{1}{2}$ d. per lb. Of course, these pigs, from their firmness, must have been grain fed. I certainly think there is something in this trade for us.

BEET SUGAR.

Beet sugar growing thrives well in Sweden, Germany, and North France, and appears to be one of the main staples of the former country. I cannot see why it should not be very successful in Victoria, especially south of the Dividing Range. From the observations which I made, I found that soil suitable to the growth of wheat and barley will yield fair beet crops. It wants a moist spring, and a warm summer and autumn. The beet received similar, though much closer, attention to that of potatoes; it requires to be weeded four or five times in the season. This is done by women and children in Sweden and Germany—the women receiving about 1s. per day, and the children 6d. The ploughmen receive from 2s. to 3s. per day.

The average crop is from 14 to 16 tons per acre, and the average price paid by the sugar factories for the beet is from 15s. to 18s. per ton, according to the sugar yield. A point not to be lost sight of in this colony, where every farmer with suitable soil, water, &c., might grow at least a small plot, which his children could weed, is the value of the beet pulp or residue after the saccharine matter has been extracted. This makes splendid fodder for cattle in the winter, and if stored like ensilage can be kept for years, retaining its sweetness and nutritive qualities.

I think there is a great future before our farmers in the beet industry, in that it is not only a branch of agriculture especially suited to our small farmers who keep pigs and cows, but the manufacture into sugar is simple; and with the duty at present on sugar every pound consumed should be, and I believe can be, produced locally. The value of this industry may be obtained by quoting the value of the sugar imports for 1891. There were 60,000 tons imported, valued at over £1,000,000. I am obtaining plans and particulars of cost of the latest sugar-beet manufacturing plant, and have also arranged for a sample of the best beet-sugar seed to be sent out. I make a slight reference again to this industry in my remarks upon the condensed skimmed milk manufacture.

OUR WINES.

To no inquiry was I more particular and curious than upon the prospects and present sales of our wines in England. Wherever I went I was disappointed to find that so little was known or thought of this important product of our colony. No doubt Mr. Burgoyne has done and is still doing his best to place it on the market, and a good display is made under glass cases at the Imperial Institute, where thousands of people may read the labels on the bottles every day, but I am sure that not one-third of these people ever know where Victoria is, and know as little of the quality or price of our wines. A popular and peculiar impression is that these wines, and indeed everything marked "Victoria," is so named in compliment to Her Majesty, and not as denoting the country in which they were produced. I am decidedly of opinion that, in addition to the proper steps being taken to manufacture and export uniform brands under Government supervision, there should be efficient and vigorous steps taken to get British consumers personally acquainted with the superior quality of these wines. As an evidence of the prevailing ignorance regarding Victoria, even amongst importers and trades-people, I asked a wine vendor in a large way of business if he had any Australian wines in stock? He replied, "Yes; I believe I have one bottle of Cape of Good Hope, which I have had in stock for nearly ten years, as I am never asked for them."

Amongst many other evidences of the want of enterprise and advertising, a prominent merchant told me, in reply to my constant inquiry "if he had any Australian wine in stock," that "he had some once, but on applying to the importer for more of the same quality he was informed that there was no more to be had, so he was obliged to induce his customers whom he had been supplying to return to French wines; that this was discouraging, as people's palates become accustomed to certain wines, and it is difficult to change their tastes." I think the pith of the whole matter lies in this merchant's remark. In the first place, a constant supply of uniform brands must be forwarded to London; and, in the second place, means must be taken to "palatizing" the British consumers to our wines. Large blending and storage cellars must be established in Victoria, from which constant and regular shipments of wines must be exported, graded, and passed by a Government expert, and placed on the market under a Government seal. Then a systematic plan should be adopted, as I have suggested in the case of fruit and frozen meats, to get these wines properly placed before the public. They must not only go into the hands of the merchants, but into the mouths of consumers. When these things are done the merits of our wines will obtain for them an unlimited market. In very few instances are Victorian wines sold on their actual merits as the wine of this colony. They are universally used for blending purposes on account of their strong alcoholic properties, a great quantity, I was told, being sent over to France

and returned beautifully got up as the wine of that country. It is in clarets and burgundies that Victoria is to principally make its name as a wine-producing country, but this will only happen when a uniform article is exported; and the stock kept up, and when such measures as I will explain to you in a special report are taken to insure these wines being brought directly under the notice of consumers.

BRANDY.

I feel quite certain, from the opinions expressed by experts in London on the latest of our Victorian developments, who have examined the samples of brandy sent over, that there can be a big trade done in this line. There may be a little labour and expense incurred in getting our wines into extensive consumption, but so soon as the English people recognise that they can obtain a pure brandy made from the Australian grape the Continental concoctions will almost disappear, and leave us the largest portion of the field.

AN INSPECTOR FOR LONDON.

I have in one of my previous reports called your attention to the necessity of an efficient commercial expert being appointed to look after the producers' interests in London, the same as other exporting countries find it to their interest to do. Of the necessity for this appointment, let me give one or two of the many instances that came under my notice during the short time I was in London. In company with an expert employed by one of our produce brokers, I went to inspect the condition upon arrival in the docks of their dairy produce. We were the first to get into the cool chamber of the steamer just arrived with 70 tons of cheese. The log shown to us by the engineer recorded an average temperature of 46° Fahr. for the voyage, which, if correct, would have been about right; but we found on examination that it was 66° Fahr., and, to show that this high temperature had been maintained for some time, the cheese brought out was very soft and registered 70° Fahr. inside. Now, putting the loss down from deterioration from this cause at 2d. per lb., the loss on this shipment alone would amount to over £1,300, so the poor producer had to suffer this loss through no fault of his own. Previous to this another cargo of cheese arrived in still worse condition, and this same firm entered an action for damages against the ship-owners, and after twelve months' litigation they were awarded £1,200. This was divided amongst the agents who had consignments on board. I do not think one consigning producer got a penny, simply because there was no one there to look after their interests. Yet another case that came under my notice. In a consignment of Australian apples that arrived for sale, I noticed on top of a few of the cases—I was told there was 300 of them—that on account of being placed too near the snow trunk of the ship's chamber there was a thin scale of ice on the top layer of the apples. On making the

inquiry I was told there would be a loss of 5s. per case on that account. I suggested, as it was only one row, to wipe it off and repack at a cost of probably 4d. per case, but was told that they would rot all the same in 24 hours, and that, as their trade was not packing but selling, they could not think of doing it. I took a few of those apples home to my hotel with me, wiped the ice off, and these remained good and sound for six weeks—another instance of the many losses sustained by producers owing to the want of an authorized officer to watch their interests at the selling end. I am aware in these economical times that the salary will be a stumbling-block; but has the time not arrived for our Agent-General to be something more than a State ornament? Is it not necessary that he should be thoroughly in touch with the perpetual advances going on, and be prepared to supervise and assist the profitable sale and proper delivery of our products, and regularly advise producers of the defects, so that they should be remedied, to prevent future losses? Failing this, is it not possible to utilize our Agent-General's office without increased expense for this useful purpose? If the appointment must be held by one who would look upon these duties as beneath the dignity of his position, could one of his officers not be appointed for the purpose? What came under my notice during the short time I was there of the losses producers are subjected to in sea carriage alone is proof sufficient for me of the necessity for the appointment. I have no wish to find fault with the temporary officer at present in charge, who is a very old and respected colonist, but, in view of future appointments, I look upon it as a want that must be supplied from somewhere.

CONDENSED MILK.

I have to record with great regret that I had no time to visit Switzerland, where the favorite brands of preserved or condensed milk come from; but while in Ireland I saw what I considered to be the most perfect machinery and arrangements for making this valuable product in full operation, treating somewhere about 12,000 gallons of milk per day. The reason I thought this the best factory I have seen was on account of the self-acting machinery for making and closing the tins, which, indeed, is a very important feature in the cost of production. I have brought plans and specifications of the latest plants and appliances for this manufacture, the approximate cost of which is about £1,500. This canning of milk will find light employment for a great many women and girls.

The difficulties hitherto in conducting this trade in our climate are to retain the freshness necessary in the milk for condensing, on account of the long distances between farms, and the want of experts to manufacture. The cheapness of labour in Europe is certainly a great assistance to foreign manufacture of this commodity, as well as of beet sugar; but while foreign countries have

this advantage, we have a compensating balance in our protection duties, and more especially in our cheap and rich lands, and no rents to pay. An important point to be borne in mind by our new settlers is that this product, as well as other milk products, gives an immediate return. Then we must not lose sight of the extensive local demands for this article. The import duty of 2d. per lb. should enable us to supply the whole of this, which in 1891 was valued at over £24,000. Of course the advantage of casual and cheap labour will place us in a better position to not only control the local market in preserved milk and beet sugar, but it may even enable us to enter into foreign competition. I now perceive that the recently-established village settlements will provide the solution of this cheap casual labour question, by the settlers and their families in these communities not only farming their own little plots, but also supplying labour to the larger farmers in the surrounding districts; and this novel and effective plan of settling the people in village communities supplies the demand of a fresh milk supply at short distances. This is the main secret of success in Europe.

WHEAT.

When in Glasgow Corn Exchange I was not a little surprised to hear that this principal article of our exports, which I had hitherto thought to be perfect, had a fault. I was told by the trade that good and all as our wheat was in strength, whiteness, and thin skin, it was very deficient in gluten, and they had to give a better price, and use more Hungarian and Russian wheats, to obtain the quality of bread necessary to satisfy the Glasgow people. The Glasgow 2-lb. loaf is about double the height of an ordinary brick, and about as square, with only a nice brown crust top and bottom, the centre being snow white and as light as a feather—it seemed to me to be altogether an appetizing little food-gem. I have obtained a sample of this gluten wheat, and intend sowing it in some of the moist districts of the colony, as I understand that our northern dry atmosphere is not suitable. I mention this with no idea of discouraging our wheat-growers, but I thought that if we could grow this gluten wheat in such districts as Gippsland and other moist parts of the colony, it would enable us to still further take the place of foreign producers in the British market.

This, sir, is a brief summary of the information gained on a journey which has involved much care and anxiety, and ceaseless activity. I am thankful, however, that I have been enabled to carry out the programme intrusted to me with a completeness which has far exceeded my most sanguine expectations, and I feel confident that the results, should I be spared to communicate them, will ripen and bear fruit in a still greater development and improvement of the dairying and other industries of the colony.

APPENDIX.

PROGRESS REPORT ON HANSEN'S BUTTER FERMENT.

It is usual in churning cream obtained by the separator to allow the cream to stand for a period of about 24 hours in order that it may turn slightly sour. This souring or ripening, as it is called by butter makers, is a kind of fermentation due to the growth in the cream of microscopic organisms, the seeds or germs of which are universally distributed, floating about like dust in the air. These organisms are ferments, and take the part in souring cream that yeast does in brewing or wine making. The object of souring the cream is fourfold—Firstly, it causes the cream to churn better; secondly, it increases the yield of butter; thirdly, when the souring is of the right kind it improves the flavour and aroma of the butter; and fourthly, butter from properly soured cream keeps better than butter from sweet cream. But there are many kinds of germs enter the cream from the atmosphere, and it will be readily understood that, while some of these may set up fermentations which will improve the butter in respect to flavour and keeping quality, others may injure it. If these injurious germs could be kept out of the cream, and none but the beneficial ones allowed to take part in the fermentation, it is reasonable to suppose that an advantage of practical value would be gained.

An attempt in this direction has been made by Professor Hansen, of Copenhagen, whose work in connexion with pure ferments has given him a leading position among scientific workers. In pursuance of his line of work, the germ which causes the souring or lactic fermentation of milk has been separated and cultivated in a pure state, and is now offered for sale to butter makers under the name of "Acid Producer," or, as we should say, "Milk Sourer."

Mr. Wilson, the Government Dairy Expert, during his recent visit to Europe, obtained some of this milk sourer from Hansen's laboratory, and on the 30th September, about six weeks after it left Copenhagen, it was placed in my hands. Mr. Wilson informed me that Professor Hansen had expressed doubt about the material reaching Australia in good condition, as he had never been able to keep it for more than three weeks. I opened the case on the 9th October, and found in it five small bottles, each holding 100 c.c. (that is to say, about $\frac{1}{4}$ th pint) of milk, charged with the ferment. The bottles were closed with corks sealed with paraffin. Three of the bottles were evidently not in proper condition, for the corks were forced partly out of them. A circular, in German, giving instructions for using the ferment was wrapped round each bottle. This circular I have translated, and a copy of the translation, in which the measures and temperatures are altered to suit English customs, is given at the end of this report. The instructions contained in it are clear and simple, and can readily be followed by any factory manager.

I have transferred the contents of three of these bottles to a number of flasks containing sterilized milk, and the contents of two of the bottles have given results of a useful kind. Experiments in butter-making for the purpose of testing the usefulness of the ferments were made. For this purpose a baby separator, churn, and butter worker were placed at our service through the kindness of Messrs. Bartram and Son. Milk was supplied on two occasions by Mr. D. Mitchell, of Lilydale. Mr. Wilson assisted in separating the cream from the milk and in all general matters, and

Miss Wilson ably conducted the churning. The experiments were performed on two occasions, and on each occasion the cream was treated in four different ways; two lots were "pasteurized," that is to say, heated up to about 185° Fah., so as to destroy most of the germs in them, and were then cooled down; and two were left unpasteurized. Afterwards Hansen's ferment was added to one of the pasteurized creams, and to one of the unpasteurized creams; the two other creams being left without anything. Next day the creams were churned separately. The following presents the results in a concise form:—

No. 1. Cream, pasteurized, and fermented with Hansen's ferment.

No. 2. Cream, not pasteurized, but fermented with Hansen's ferment.

No. 3. Cream, pasteurized, and left to take its natural course, being, in fact, quite sweet when churned.

No. 4. Cream, not pasteurized, and left to ferment naturally.

—			Date of Churning.	Aroma.	Texture.	Date of turning Rancid.
1st bottle of Ferment.	No. 1A	.. ..	17th Oct.	Refined, but faint	Firm ..	6th Nov.*
	No. 2A	.. .	17th Oct.	Good, but strong..	Soft ..	23th Oct.
	No. 3A	.. ..	17th Oct.	Peculiar, like sterilized cream	Firm ..	29th Oct.
	No. 4A	.. ..	17th Oct.	Very strong ..	Soft ..	26th Oct.
2nd bottle of Ferment.	Kept in jars for public inspection—					
	No. 1B	.. ..	24th Oct.	Very fine, and strong	Firm ..	†
	No. 2B	.. ..	24th Oct.	Good	Moderate	6th Nov.‡
	No. 3B	.. ..	24th Oct.	Fair; better than in No. 3A	Firm ..	8th Nov.
	No. 4B	.. ..	24th Oct.	Strong, but good..	Moderate	15th Nov.§
	Kept in bottles, not for public inspection—					
	No. 1c	.. ..	24th Oct.	Very fine, and strong	Firm ..	||
	No. 2c	.. ..	24th Oct.	Good	Moderate	13th Nov.
	No. 3c	.. .	24th Oct.	Fair; better than in No. 3A	Firm ...	¶
	No. 4c	.. ..	24th Oct.	Strong, but good..	Moderate	13th Nov.**

* The aroma in this was too faint, otherwise it was the best sample. The weakness of the aroma was due to the souring having been carried on at too low a temperature.

† Still sweet—15th November—or if anything a very faintly rancid smell.

‡ Putrid smell on 1st November, which after disappeared.

§ Very strong odour, 13th November.

|| Still sweet, 15th November.

¶ Very faintly rancid, 15th November.

** Very strong odour, 13th November.

The samples were all kept on a table in the laboratory, where the temperature was for several days so high that several of the samples were partially melted; and, moreover, all the samples, except the last lot, were open to public inspection, and many people tested them with their knives or fingers.

The trials are not conclusive; but, so far as they have gone, there is no doubt in my mind that they show the superiority of the No. 1 samples, and are therefore in favour of using a pure lactic ferment in sterilized cream in place of the natural souring process. No doubt as good butters may sometimes be made with the natural impure ferments as with the pure cultivated ferments; but uniformity of the natural fermentation cannot be counted upon, and even with the best management naturally soured creams will at times produce butters of inferior aroma and poor keeping quality. The advantage of using the pure ferment is that it puts the ripening of the cream under control—thus, in conjunction with proper pasturage and breeding, giving uniformity and certainty to the aroma and keeping quality of the butter.

It is scarcely necessary to point out that in using pure ferments most scrupulous attention must be given to the cleanliness of the rooms in which the cream is ripened and churned, and of the persons directly engaged in the work; and that the water used in churning should be filtered by a sterilizing filter. The ideal to be aimed at, and which we may expect to see before very long brought into practice, will be the entry of the milk into a sterilizing apparatus at one end of its course, and its exit at the other end in the form of butter, all contact with the outer air and with impure water and other sources of contamination being thus rigidly excluded. With a method of this kind the keeping quality of the butter would surpass anything yet attained.

The ferment now in my hands was a mixture of at least four different kinds. One of these had, I have reason to believe, got in by accident, and it has since been removed. The remaining ones need to be specially studied, and their action and importance in souring the cream properly ascertained by further trials before the material can be prepared and distributed for use on a large scale in any of the factories.

A. N. PEARSON.

Agricultural Laboratory, Melbourne,
15th November, 1893.

TRANSLATION OF DIRECTIONS FOR USING HANSEN'S CREAM FERMENT OR CREAM SOURER FOR USE IN BUTTER FATORIES AND DAIRIES.

"ACID PRODUCER"

From Chr. Hansen's Laboratory of Technical Chemistry, Copenhagen.

PREPARATION OF THE ACID IN THE FACTORY OR DAIRY.

The contents of one bottle of the "Acid Producer" or ferment are mixed with one gallon* of "pasteurized" skimmed milk of a temperature of 90° Fah., the milk being well stirred while pouring in the ferment. This mixture is then allowed to stand in a moderately warm place (as, for instance, in the engine or boiler house) until it changes into a uniform jelly, which will occur, as a rule, in the course of about 24 hours. Care must be taken that during this time the temperature shall continue as nearly uniformly as possible at the degree stated, namely, 90° Fah.

The sour milk, or "acid," as we may call it, thus produced has now to be used in different ways, according to the size of the dairy or factory.

Example 1.—In factories which work not more than 40 gallons of cream into butter daily, the one gallon of sour milk or acid is put aside for use as stock, or "mother-acid." It is best kept in a glazed stoneware jar, furnished with a tight-fitting lid, the jar being placed in ice or in running water of a temperature not exceeding 50° Fah. In this way the "mother-acid" can be kept fresh for four days. One-fifth gallon of the "mother-acid" is then taken each day, and with it up to two gallons of milk of 90° Fah. temperature can be made sour in about 24 hours; and the sour milk or acid obtained in this way constitutes the acid needed for souring one day's cream; or, stated more briefly, it is the "daily-acid," as distinguished from the "mother-acid." From the last one-fifth gallon of the "mother-acid" must be made, in the manner already described, a new lot of "mother-acid" for use during the next four days. This procedure can be repeated three or four times.

Example 2.—In dairies or factories which churn up to 200 gallons of cream daily, the one gallon of acid prepared directly from the small bottle of the ferment will, on the other hand, be all used at once for the souring of 10 gallons of pasteurized skimmed milk of 90° Fah. in the usual time of about 24 hours. As soon as the 11 gallons of mixture thus resulting has turned into a uniform jelly, the greater part of it is used for souring the cream, $1\frac{1}{2}$ gallons, however, being kept back to be used as follows:—

One gallon for preparing 10 gallons of "daily-acid" for use next day.

Two-fifths gallon for preparing a stock of $4\frac{1}{2}$ gallons of "mother-acid." Of this "mother-acid," one gallon a day is used for the next four days in preparing the "daily-acid," and with the $\frac{2}{5}$ gallon left a new lot of $4\frac{1}{2}$ gallons of "mother-acid" is again produced. And so on, three to four times.

* Five litres—equal to about $8\frac{3}{4}$ pints—is the quantity stated in the original. But it is better at the outset to alter the measures so as to suit the practices of our factories, which work by the gallon. For using this ferment, I recommend that gallon measures divided into tenths be obtained, and also some one-fifth gallon measures.—A. N. P.

It may, however, be left to each factory to determine for itself how much acid should be prepared in its own case. All that is needed is that attention should be given to the following rules :—

- (1) That in preparing the "mother-acid" and also the "daily-acid" only pasteurized skimmed milk shall be used.
- (2) That the quantity of pasteurized skimmed milk which is taken for preparing any new quantity of acid (whether daily or mother acid) shall amount to ten times the quantity of the old acid which is added to it.
- (3) That the temperature of the milk during the 24 hours that it is souring shall be kept at 90° Fah.

SOURING THE CREAM.

For souring the cream freshly prepared "daily-acid" must be used, about 6 per cent of the weight of the cream, at a temperature varying from 60° to 70° Fah., according to the season of the year and temperature of the dairy. For souring pasteurized cream more of the acid must be used (8 to 10 per cent.), and the temperature must be higher, namely 65° to 75° Fah. In all other respects the manufacture of the butter is carried out just in the usual way.

RENEWAL OF THE FERMENT.

The renovation of the acid in the dairy by means of a fresh lot of our ferment or acid producer will obviously be unnecessary so long as the buttermilk or the acid prepared in the dairy or factory is perfectly good, and this depends for the most part on the cleanliness and carefulness always observed in making the acid. As a rule, a new lot of our ferment will be required only within a period of two or three weeks.

PASTEURIZING THE MILK.

Fresh separator milk is to be preferred, but fresh hand-skimmed milk may be used. The milk is poured into an ordinary pail, so as not to quite fill it. This pail is then put into a larger vessel containing boiling water, and the milk is vigorously stirred about with a tin stirrer or with the thermometer, until it becomes warmed up to 170° Fah., at which temperature it is left for a quarter of an hour; it is then cooled down by means of water or ice to the souring temperature (90° Fah.).

CLEANSING AND KEEPING CLEAN THE VESSELS AND UTENSILS.

Stoneware jars are the most suitable vessels in which to make and keep the acid; in case copper or brass vessels are used they must be well tinned.

All vessels with which the acid comes in contact must be cleaned in the usual way, and afterwards with clear lime water. Also it is recommended that when not in use they should be kept filled with lime water. Tin vessels should be further cleaned immediately before using by steaming for a quarter hour. Stirrers and thermometers should be put into some vessel for steaming. Wooden vessels, which will not bear steaming, can be used again immediately after the lime water is removed from them. Never on any account rinse them out with ordinary water. The small amount of lime water which remains clinging to the sides of the vessels will do no harm. The churn is best left over night filled with lime water; in the morning it is turned for a few minutes with the lime water in it, after which the lime water is emptied out, and the churn brought into use.

PREPARING AND USING THE LIME WATER.

In a large cask or tank of wood or iron freshly slaked lime is stirred about with as much water as will nearly fill the cask, sufficient lime being used to form a layer 4 or 5 inches thick when it settles down to the bottom. For cleaning the vessels, &c., the clear upper liquid is taken. This having been used, fresh water is run in again, and the contents of the cask or tank are again well stirred with a stirrer, after which the liquid is allowed to stand for some hours until the lime has settled to the bottom again. This process can be repeated continually, if care be taken to renew the lime now and again, so that there may be always a layer of 4 or 5 inches thick on the bottom. All wooden utensils, such as stirrers, thermometer-holders, &c., are best kept standing in lime water, and can then be used without any previous rinsing.

GENERAL REMARKS ON THE PROPERTIES OF THE CREAM FERMENT, AND ON THE ADVANTAGES OF ITS USE IN DAIRIES AND FACTORIES.

The form in which the ferment is now presented to the public is the result of our effort to produce a souring preparation which could be sent long distances and kept for a length of time. From this, however, it must not be understood that it is a matter of indifference as to whether the ferment is used at once, or not until after the lapse of, say, six weeks. The ferment is a living organism like yeast, and always deteriorates somewhat with long keeping; and the effect of this deterioration principally is that milk will take a proportionately longer time to become properly soured with it.

As to the properties of the ferment, these will show themselves in a useful influence not only on the aroma and fineness of the butter, but also on its keeping quality. The goodness of butter depends primarily on the regular course of the cream-souring or ripening process, into which no irregularities or by-processes should be allowed to enter. We believe, therefore, that our preparation will have its greatest usefulness in those cases where the quality of the butter is defective; but even in dairies and factories which already produce good butter it will serve to give certainty to the work, and make it independent of chance irregularities.

The best result is obtained with our ferment if it be used with cream pasteurized at a temperature of 160° to 170° Fah.

FRUIT PULPS.

The Continental Fruit Packing Co., London, 14 St. Mary Axe, London, E.C., writing on 22nd July, 1893, submitted the following report :—

As promised, we beg to give you some information on the subject of pulps and fruits.

APRICOT PULP.

The preparation of apricot pulp is a very simple matter. The fruit is simply cut in halves, the stones thrown away, and the halves put in the tins, and the fruit cooked in the tin in the usual manner. The less it is cooked the better it will serve the purposes of jam-makers afterwards, and the great point is to get the preserved fruit as whole as possible, and not in the form of *purée*, but in the form of halves of fruit. We may mention that the best apricot pulp is made from fruit which is not quite ripe. In this way it maintains its form, and does not run into *purée*. If a superior quality is wanted, however, the preparation is more troublesome, as manufacturers with up to date machinery cook the fruit *in vacuo*, and get rid of a large percentage of the vegetable water which in the lower quality of pulp remains in the tin. The following is an analysis of a mature apricot grown in Spain :—

Animal matter	...	...	...	...	17
Colouring matter	..	...	...	.	10
Vegetable wood	...	...	...	...	1·86
Vegetable gums	...	...	...	...	5·12
Sugar	...	...	...	...	16·48
Melic acid	...	...	...	...	1·80
Vegetable water	...	...	...	...	74·47

The object, of course, in cooking the fruit *in vacuo* is to eliminate part of the vegetable water. They succeed in getting rid of about 25 per cent. of the water. This renders the pulp more valuable, as, of course, jam-makers find a much greater economy in using pulp with 50 per cent. of vegetable water than they would if they used pulp containing 75 per cent.

RASPBERRY PULP.

It is very difficult to get information on this subject, as only small quantities are imported into this country, although large quantities are made here by the jam-makers themselves, and by growers of the fruit in Scotland and elsewhere.

The usual price of fresh raspberries here is £23 to £25 per ton. Jam-makers buy the fruit, boil it down into pulp, pack in stone jars, tie down, and hold for six or eight months at a time. Some pack in casks, but it does not keep so well as in jars. In some seasons, when raspberries are scarce here, the price goes up to £35 or £40, but this year the price is low, as jam-makers hold stocks from last year. This pulp would, of course, be more appreciated by jam-makers if it were also cooked *in vacuo*, and the vegetable water reduced. Jam-makers, who are, of course, practical men, always test their pulps before buying, and know exactly what is the proportion of water they contain, so that they always pay for extra quality.

Both in the case of apricot and raspberry pulps, the more concentrated it is the less your freight will be. In France some special machinery is made for the preparation of these pulps, particularly the higher grades, which are cooked *in vacuo*.

We think it would be better to pack raspberry pulp in the same form as the apricot pulp, viz., 5-kilo. tins. The shipment of the pulp in casks would be rather risky. We have made inquiries, but cannot trace the shipper of the raspberry pulp which Mr. McCallum mentioned to you during your visit here.

PEARS.

After apricots, pears are most in favour in this market. The usual pear that is packed is the Bartlett or Williams' Bon Chretien pear.

P.S.—No sugar is employed for the pulps, but for the pears and apricots a syrup of 23° to 25° is used.

EXPERIMENT IN SHIPPING GREEN FRUIT AS GENERAL CARGO.

The following correspondence shows the results that attended an experiment made in the shipping of green fruit as general cargo :—

DEAR SIR,

Hobart Post Office, Tasmania,
18th April, 1893.

By the s.s. *Damascus* (one of the Aberdeen line, which sails by the Cape) I forwarded, on the 13th inst., sixteen cases of fruit, packed in different ways.

This is a trial shipment, to test the feasibility or otherwise of sending fruit as ordinary cargo by a Cape boat. It consists of grapes and apples. The grapes are two different varieties, packed with two sorts of cork dust. They are packed in six different ways—

- (1) wrapped in paper,
- (2) wrapped in paper and packed in cork dust,
- (3) wrapped in paper and packed in sterilized saw-dust,
- (4) packed in cork dust,
- (5) packed in saw-dust,
- (6) unwrapped.

These apples are consigned to Edward Jacobs and Son, Covent Garden, with instructions to open each case, and see what the effect of the different packings have been, and should reach London about 27th May. Should Mr. Wilson, your dairy expert, be remaining that long in London I should be glad if he could be present at the opening, and be asked to furnish an independent report.

You will understand the importance to the Victorian if it can be demonstrated that such fruits as apples and grapes can be carried without cold storage, the freight as ordinary cargo being 2s. per case, as against 4s. 6d. in cool storage.

Yours faithfully,

The Minister of Agriculture,
Public Buildings, Melbourne.

ALFRED HENRY.

REPORT ON THE SIXTEEN CASES OF FRUIT FROM HOBART SENT BY
MR. ALFRED HENRY, PER S.S. "DAMASCUS."

Agriculture Department, Victoria,
30th June, 1893.

This consignment of fruit consisted of four cases of grapes and twelve of apples. The grapes all arrived in a damaged condition, due to the long voyage combined with a high temperature, and producing a withered appearance; besides which most of the berries fell from the stalk. Three of the boxes were sold at 2s. each, and one was so bad it was unsaleable. In the opinion of the brokers in Covent Garden the method of packing had nothing to do with the condition of the fruit.

The apples showed signs of staleness in every package, due to a long voyage and high temperature. When the fruit was cut it was juiceless, soft, and with a wrinkled skin. It is the opinion of the brokers that the methods of packing were not to blame for the stale condition of the fruit. There have been many previous attempts to send fruit as ordinary cargo, and they have all proved unsatisfactory. The prices realized by the apples were 5s. per case, which was 2s. to 3s. less per case than similar apples sent in the cool chamber.

In ordinary years these apples would have realized from 8s. to 10s., but the great influx of soft English and continental fruits, owing to the abnormally early season, has this year depreciated Australian apples to the difference above mentioned.

D. WILSON,
Dairy Expert.

CLEMENTS AND SON'S REPORT ON THE CHEESE TRADE.

Glasgow, 11th May, 1893.

DEAR SIR,

The two classes of cheese wanted for Glasgow market are Cheddars and Dunlops. The Cheddars to be about 70 or 80 lbs. weight, coloured, but not too high, showing plenty of quality, but not too acid, edges must be square; and we would suggest that it would be advisable to use very strong bandages on all this class of cheese, so that the retailers can take off the bandages, and they have the appearance of home cheese when placed on the counter.

The most saleable cheese in this country now are those made on the Canadian principle.

The Dunlops should be about $15\frac{1}{2}$ inches broad and $8\frac{1}{2}$ inches deep, white, and showing plenty of quality. To get this quality we think the curd should be cooked two or three degrees lower than Cheddars, otherwise they may be made on the same system.

Cheddar cheese, as above described, will find a ready sale in all markets in England and Scotland, with the exception of Manchester and the other cotton towns, where the Dunlops will find most favour. We have no doubt but you will soon be able to give us the finest class of cheese from Australia if the makers are only started on a sound theory and practice in cheese making.

Yours truly,

CLEMENTS & SON.

D. Wilson, Esq., London.

HINTS ON HANDLING AND SELLING FRUIT.

MESSRS. KEELING AND HUNT'S REPORT.

Australian fruit-growers are naturally anxious to know what are the best arrangements to make in London for the sale of their shipments.

We have some experience in the trade as consignees who are entirely independent of all salesmen, and who have advantageously dealt with them as salesmen and not as agents. We distinctly assert that it is to the benefit of shippers in Australia to combine, and, as far as growing and shipment are concerned, to sink all natural feelings of competition. Whether this can be best done by growers forming themselves into a fruit-growers' association, or a fruit-growers' co-operative company, floated as a commercial concern, the growers themselves can decide, according to which is most remunerative to themselves individually. If a fruit-growers' association, a

reliable forwarding agent, paid by results, can be appointed in Victoria to receive and forward the fruit; or if a co-operative joint stock company, that company will, of course, do the same work through the directors and managers. The result will be the same, viz., to consolidate shipments to one channel in Australia through one channel to England, so that the fruit in its turn may be distributed through one channel in England. So far, co-operation—co-operation of the growers to ship through one channel to the market.

Now, as to concentration on this side, which is an important matter with many interests involved. The advantages of concentration here may be detailed as follows:—

1. *Reduction in charges through a large quantity passing through one centre.*—This advantage must be obvious. The dock companies, carmen, lightermen, and those who handle the goods will make reductions in charges to one firm who deals with a large quantity which will not be made to ten men each with one-tenth part of that quantity. Besides this, the steam-ship companies here, as well as dock companies and carriers, prefer to deal with one rather than with more consignees; there is more promptitude and certainty in dealing with the goods, and there is less labour, which means a lower charge.

2. *Preservation of property.*—We have often found that when a number of consignees have (as is generally the case with green fruit) all demanded prompt delivery, each one wanting it first, the goods have suffered through being either handled too much, or, in the hurry, too roughly.

3. *Confusion at Docks.*—The same remarks apply to the confusion and wrong deliveries which often take place, causing trouble and expense, but which could be avoided by the dock company being able to take the instructions of one person instead of many.

4. *The independent position of the sole consignee in the matter of selling.*—Herein lies the secret of success in obtaining value for colonial fruit in London. It is evident that when a grower ships his fruit he is not in such a good position to choose the salesman who shall, six or seven weeks hence, sell his goods as is an independent consignee who is able to gauge the market at time of arrival. A certain salesman may be suitable at time of shipment, but, owing to his finances going wrong, or his dealing in a competitive article, or from many other reasons, be at the time of the arrival of the fruit on this side the most unsuitable man to sell it. Also, one salesman is more suitable than another for many other reasons, of which an independent agent on the spot alone can judge, according to the circumstances before him at the time.

6. *Division among salesmen of colonial fruits will only lead to low prices, as indeed it has already done.*—Competition among sellers is not wanted, and has been proved to be injurious to prices. The competition must be confined to buyers. Concentration of goods produces this effect—that where the fruit is the buyers will congregate, and the more buyers congregate on a given spot to bid the better prices will be realized, far better, it is manifest, than will be obtained if the said buyers are divided into, say, ten clumps, all buying at the same time.

7. *Correspondence.*—It must certainly be an advantage to shippers to receive account sales from one consignee rather than from several, thus minimizing in many ways. It is also often injurious to disseminate too much among salesmen information as to quantities coming; it is better to confide this and similar matters to one trusted firm, leaving them to use it to growers' advantage.

The three cardinal principles are:—

- (1) Co-operate, and save expenses in Australia.
- (2) Concentrate, and save expenses in London, and get full value for consignments.
- (3) Treat salesmen and brokers as such, and not as agents.

TASMANIAN APPLES, EX "ORIENT.

Import Mark or Brand.	Lot.		Boxes.	s.	d.
G7 APM	... 411.	Adams Pearmain ...	6	6	3
" ST	... 412.	Sturmer Pippins ...	5	7	0
" BPM	... 413.	Blue Pearmain ...	1	5	0
" HC	... 414.	Hollow Crown Pippins	1	6	3
GAG K & H	... 415.	Scarlet Pearmain ...	10	5	9
SPM					
" STP	... 416.	Sturmer Pippins ...	8	6	9
" FC	... 417.	French Crabs ...	5	6	6
" NYP 1	} 418.	... ..	2	6	9
" APM 1					
RYAN RP	... 419.	Ribstone Pippins, slack	1	3	6
" SP	... 420.	Sturmer Pippins ...	6	7	0
" FC	... 421.	French Crabs ...	6	6	6
" SPM 1	} 422.	... ..	2	6	0
" MC 1					
C.					
TILLACK SPM	423.	Scarlet Pearmain ...	4	7	9
" STP	424.	Sturmer Pippins ...	8	7	3
UPC	... 425.	" " ...	13	7	9
GAC STP	... 426.	" " ...	12		
	427.	" " ...	12		
	428.	" " slack	1	3	6
UPC	... 429.	Scarlet Pearmain ...	14	7	0
GAC SPM	... 430.	" " ...	14		
" " FC	... 431.	French Crabs (2 wet)	10	6	6
" " R	... 432.	" " ...	2	6	9
" TM in heart	433.	" " ...	10		
JGS K&H	} 434.	Sturmer Pippins ...	15	8	3
in shield STU					
	435.	" " ...	14	8	0
	436.	" " slack	1	3	9
UPC	... 437.	Scarlet Pearmain ...	12	5	9
AA SPM	... 438.	" " ...	12		
	439.	" " ...	12		
	440.	" " slack	1	3	9
" " " S	... 441.	" " ...	7	6	3
" " " prime	442.	" " ...	1	5	0
" " STP	... 443.	Sturmer Pippins	14	6	9
	444.	" " (2 wet)	14		
" " " S	... 445.	" " ...	5	6	6
" " FC W	... 446.	French Crabs	12	6	0
	447.	" " ...	10		
" BB SPM	... 448.	Scarlet Pearmain ...	14	5	3
	449.	" " ...	14		
	450.	" " slack	2	3	9
" " " S	... 451.	" " ...	7	6	3
" " STP	... 452.	Sturmer Pippins	13	7	3
	453.	" " ...	13		
	454.	" " (1 S) slack	3	3	9
" " " S	... 455.	" " ...	5	7	0
" " " P	... 456.	" " ...	7	6	6
" " FCW	... 457.	French Crabs	12	7	3
	458.	" " ...	10		
KUNGA SPM	... 459.	Scarlet Pearmain ...	6	6	9
" NYP	... 460.	New York Pippins...	6	7	3
" STP	... 461.	Sturmer Pippins	6	7	0
	462.	" " slack	1	3	9

TASMANIAN APPLES, EX "ORIENT"—continued.

Import Mark or Brand.	Lot.		Boxes.	s.	d.
KUNGA CE ...	463.	Crows Eggs wet	1	5	3
B. GRIGGS	464.	Sturmer Pippins ...	10	6	9
extra STP					
ZZ K&H over L	465.	Stone Pippins ...	16	5	6
SP In diamond					
" " NYP ...	466.	New York Pippins	5	6	6
" " CE ...	467.	Crows Eggs	1		
" " FC ...	468.	French Crabs	14	6	3
" " " ...	469.	" "	14		
" " AR ...	470.	Aromatic Russets	17	5	6
" " AP ...	471.	Adams Pearmain	7	6	0
" " STP ...	472.	Sturmer Pippins	6	5	9
CL STP	473.	" "	3		
" SPM	474.	Scarlet Pearmain	2		
A. DOWNIE over K&H over BO with orange over prime E	475.	Blenheim Orange	10	5	0
" " CE ...	476.	" " slack	1	3	9
" " NYP ...	477.	Crows Eggs	7	5	6
" " E SPM	478.	New York Pippins...	1	6	3
" " NYP ...	479.	Scarlet Pearmain	3		
" " FC ...	480.	New York Pippins...	3		
" " " ...	481.	French Crabs	16		
" " " ...	482.	" "	16		
" " " ...	483.	" "	13		
" " STP ...	484.	Sturmer Pippins	18		
" " " ...	485.	" "	18		
" " " ...	486.	" " slack	2	3	9
A. DOWNIE over apple and Prime SPM	487.	Scarlet Pearmain	15	5	6
" " " ...	488.	" "	15	5	0
" " " ...	489.	" "	15		
" " " ...	490.	" "	12	5	3
" " " ...	491.	" "	12		
" " " ...	492.	" " slack	2	3	9
" " SP ...	493.	" "	8	6	3
M. MILLER over M in circle STP	494.	Sturmer Pippins	20	7	6
" " SPM ...	495.	Scarlet Pearmain	4	5	9
" " FC ...	496.	French Crabs	1	5	9
JGS in shield with K & H over SPM	497.	Scarlet Pearmain	15	6	3
" COP ...	498.	Cox's Orange Pippins	5		
GORDON	499.	Scarlet Pearmain ...	9		
HRB SPM					
" " NYP ...	500.	New York Pippins...	13	6	0
" " STP ...	501.	Sturmer Pippins	6	6	6
WS ● COP ...	502.	Cox's Orange Pippins	16	5	0
" " STP ...	503.	Sturmer Pippins	4	6	6
O. GEEVES	504.	French Crabs	18	5	9
" " " ...	505.	" "	18	6	0
" " " ...	506.	" "	17		
" " " ...	507.	" "	16		
" STP ...	508.	Sturmer Pippins	13	6	6
" " " ...	509.	" "	12		
" AF ...	510.	Alfristons	1	5	3

TASMANIAN APPLES, EX "ORIENT"—*continued.*

Import Mark or Brand.	Lot.	Boxes.	s.	d.
O. GEEVES NY	511. New York Pippins	6	6	3
" " select	512.	3		
" NP	513. New Town Pippins	9	4	9
" SPM	514. Scarlet Pearmain	5	6	0
" SP 1	515. ...	2		
" APM 1				
UPC CC	516. Scarlet Pearmain	10	5	6
SPM	517. " "	10	5	3
" " " S	518. " " slack	1	3	9
" " STP	519. " "	7	5	0
" " " S	520. Sturmer Pippins	14	5	9
" " " P	521. " " slack	14		
" " " S	522. " " slack	2	3	9
" " " P	523. " "	6	5	9
" " SPM G	524. " "	5		
" " FC	525. Scarlet Pearmain	10	5	3
" " " S	526. French Crabs	5	6	3
" " " S	527. " " slack	1	3	9
" " RPM	528. Royal Pearmain	2	6	3
" " " S	529. " "	1		
" " ER G	530. " "	2	4	9
" " APM	531. Adams Pearmain	10	5	0
" DD STP	532. Sturmer Pippins	14	6	0
" " " S	533. " "	14		
" " " S	534. " " slack	2	3	9
" " SPM	535. " "	11	5	0
" " " S	536. Scarlet Pearmain	18	4	9
" " " G	537. " " (2 G) slack	3	3	9
" " APM	538. " "	8	5	3
" " FC	539. Adams Pearmain	10	5	0
" " " S	540. French Crabs	20	5	3
Douglas in diamond 1/3	541. " "	3	7	6
" 4/5.8.9	542. " "	4	8	0
" 6/7	543. Pears	2		
" 10/11	544. Quinces	3	3	6

JAMES OSBORNE AND CO.'S, GLASGOW, REPORT ON BALFOUR WILLIAMSON'S CALIFORNIAN DRIED FRUITS, DATED 2ND MARCH, 1893.

Raisins.—The best months for the sale are from October to December. Taking last year's price as standard, such quality as your sample would be worth 35s. to 40s. per 110 lbs., packed in boxes of 22 lbs. each.

Apples.—Sample seems ordinary quality; such as brought about 40s. per cwt. last year. Extra fancy are to-day bringing 50s. to 52s. The fault of your sample is that the apples are not properly cored, irregular in colour, and would therefore only grade as a secondary quality. Extra fancy must be clean, white, and evenly cut pieces. They are packed in deep boxes, 50 lbs. each.

Prunes.—A nice sample, but hardly so well cured as the French. French fruit of this size sells to-day about 62s. Prunes are packed in boxes of 28 lbs and 56 lbs., but the small size is preferred.

On all dried fruits, except apples, there is a duty of 7s. per cwt.

CHECKING ENGINEER'S LOG.

Orient Steam Navigation Company Limited,
13 Fenchurch-avenue, London, E.C., 6th June, 1893.

D. Wilson, Esq., Wood's Hotel, within Furnival's Inn, E.C.

DEAR SIR,

Your letter of the 30th ult., addressed to Mr. W. R. Anderson, has been laid before the Board, and I am instructed to inform you in reply that they regret they are unable to comply with your request to place a thermograph on board one of the steamers for trial. They think it would be better if you could make experiments in some other company not engaged in the carriage of frozen meat, &c.

Yours faithfully,

B. WAYMOUTH, Secretary.

Cornell University Library
SF 227.A88W7

Report



3 1924 003 097 098

